

Math 102, Fall 2021 — Homework 0

Tim Chumley

Due September 3 at 5:00 pm

Instructions. This introductory problem set is partly to get you familiar with the class structure and technological tools. I know it's fast to have homework due right away, so thanks for jumping in!

Problem 1. Please respond to the [pre-semester survey](#) on Moodle.

Problem 2. Bookmark the [class web page](#) and read the syllabus there.

Problem 3. If you don't have a copy of our textbook, download a free copy of the [6th edition of our textbook](#). The official edition for our class is the 7th edition, but the 6th edition will be fine.

Problem 4. Read these [guidelines for writing good homework solutions](#).

Problem 5. We will use [Webwork](#) for online homework. You should be able to log on using the MHC username and password you use for other systems like email. Please try logging in and do the short Homework 0 assignment posted there. Let me know if you run into any issues.

Problem 6. We will use [Gradescope](#) for written homework submissions. If you haven't used it before, you should make an account and read this [short tutorial](#) on submitting assignments. Once you have an account, you should add yourself to our section using the following Entry Code: **KYX8XR**.

Problem 7. There's one more problem to get you practicing with Gradescope based on material from the first day (or two) of class. Write up answers to the following questions, keeping in mind the guidelines in Problem 4 above. Submit a scan of your solutions (or if you have a tablet, you can submit a pdf from your notes app) on Gradescope.

1. For each of the following, compute the limit or explain why it does not exist:

(a) $\lim_{n \rightarrow \infty} \frac{n^3 - n^2 + 3n + 5}{4n^3 + n}$

(b) $\lim_{n \rightarrow \infty} \frac{2n + (-1)^n 5}{4n - (-1)^n 3}$

(c) $\lim_{n \rightarrow \infty} 5 + 2^{-3n}$

(d) $\lim_{n \rightarrow \infty} \frac{n}{10} + \frac{10}{n}$

2. On a separate page, write me a short note. It can be anything (eg. a picture of a pet, what you might want to major in, or what you're excited about this year). I just want you to see how to submit assignments with multiple pages in Gradescope and it will be nice to learn something about you :)